

Q Calculating Median from the following Frequency Distribution.

C.I	f	C.f
40-49	14	14
50-59	12	26
60-69	15	41
70-79	10	51
80-89	15	66
90-99	14	80

C.f preceding the median class.

← Median Class

$N = 80$

Step 1: Calculate the cumulative frequency

Step 2: Locate the Median Class.

$$\frac{N}{2} = \frac{80}{2} = 40$$

40 lies in the C.f 41 and hence the median lies between 60-69 {which is the corresponding C.f of 41}.

Step 3: Apply the formula:

$$m \text{ or } m_d = L + \frac{\frac{N}{2} - C_{f \text{ of } x_i}}{f_m}$$

$$= 60 + \frac{80/2 - 26}{15} \times 10$$

$$= 60 + \frac{40 - 26}{15} \times 10$$

$$= 60 + \frac{14}{15} \times 10$$

$$= 60 + 0.933 \times 10$$

$$= 60 + 9.33$$

$$m d_n = 69.33.$$

Q. Calculating Median from the following Frequency Distribution.

C.I	f	C.f
30-34	2	20
25-29	3	18
20-24	6	15
15-19	4	9
10-14	5	5
$N=20$		

Median Class

c.f preceding the Median class

$N/2 = 20/2 = 10$

$$mdn = L + \frac{N/2 - Cfp}{f_m} \times i$$

$$= 20 + \frac{10 - 9}{6} \times 5$$

$$= 20 + \frac{1}{6} \times 5$$

$$= 20 + 0.166 \times 5$$

$$= 20 + 0.83$$

$$Mdn = 20.83$$